



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

March 22, 2013

Mr. Peter Cappel
AIMCO
4582 S. Ulster Street Parkway
Suite 1100
Denver, CO 80237

Re: Review of Second Revised Work Plan
for the Third Round of CAP18 ME
Injections
Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, IN
VRP # 6061202

Dear Mr. Cappel:

This office has completed review of the "Second Revised Work Plan for the Third Round of CAP18 ME Injections and Interim Remediation Alternative Description Summary Report." The document was reviewed to determine consistency with the Indiana Department of Environmental Management (IDEM)'s Voluntary Remediation Program (VRP) guidelines. During the review of the document comments were generated that need to be addressed before IDEM can agree to additional application of CAP18 ME.

GENERAL COMMENTS

1. A baseline groundwater sampling event must be conducted with results communicated to IDEM prior to beginning injections. The baseline sampling should also include hydrologic testing to confirm the influence of the remedial injections on the formation. The sampling may coincide with one of the regularly scheduled quarterly monitoring events.
2. During the injections, the groundwater elevations in nearby wells should be closely monitored to evaluate hydraulic control during remedial implementation. The groundwater elevation monitoring should continue after the injections to assess the physical behavior of the substrate in the formation. The frequency of monitoring both during and after injections should be based on the results of the hydrologic testing and should be submitted to IDEM for review prior to beginning injections. Once the frequency has been agreed upon the results of groundwater elevations monitoring should be submitted with the quarterly monitoring reports.
3. CAP18 ME creates an anaerobic environment that allows fermentation to occur. Since vapor intrusion is known to occur in the area, IDEM requests that methane be monitored in wells MMW-P-11, MMW-P-12, MMW-11S, and MMW-12S during the first quarter after injections to evaluate this concern. After submittal to IDEM, the data will be evaluated to determine if methane monitoring should continue.

4. Vinyl chloride (VC) is commonly produced by CAP18 as part of the bioremediation process. Considering that several of the drinking water wells in the Vermont/Cossell neighborhood are contaminated with VC, particular attention should be given to the post injection contaminant trends in MMW-P-12, MMW-P-13, MMW-P-14, and MW-170 well nests. If post injection monitoring shows that the VC in these wells continues to increase appreciably above the baseline sampling results for more than two consecutive quarters, then a contingency plan should be implemented to prevent further degradation of the drinking water supply.
5. The report states that post injection monitoring will continue on a quarterly basis with results "submitted to IDEM at the end of the month following each sampling quarter." This is unnecessarily complex. To date, the analytical results have not been submitted to IDEM on a regular basis. It is important that the sampling results are submitted promptly so potential concerns can be addressed in a timely manner. Therefore, IDEM requests that the quarterly monitoring results be submitted approximately 60 days after sampling occurs unless a written extension request is submitted and approved.
6. The final remedial objectives for this remedy were not included in the report, but will be submitted as part of the forthcoming Remediation Work Plan (RWP). IDEM requests that the RWP be submitted within 180 days from the date of this letter. The RWP will need to propose clear, long-term remedial objectives for the project. Also, a contingency plan for potential movement of VC towards the impacted residential neighborhood should be included. As long as drinking water and vapor intrusion receptors remain and it is unlikely that the site will be able to obtain a Covenant Not To Sue without using additional remedial measures to supplement the CAP18 ME injections.

Responses to the comments contained in this letter should be submitted to IDEM prior to proceeding with the CAP 18 injections. If you have any questions, please contact me at (317) 234-2513, (800) 451-6027, or at canderson@idem.in.gov.

Sincerely,



Carmen Anderson, Senior Project Manager
Remediation Services Branch
Office of Land Quality

cc: John Mundell, Mundell & Associates, 110 S. Downey Ave., Indianapolis, IN 46219
Andrew Gremos, ENVIRON, One Indiana Square, Suite 2335, Indianapolis, IN 46204
Bob Lewis, Genuine Parts Company, 2999 Circle 75 Parkway, Atlanta, GA 30339
Shelly Lam, US Environmental Protection Agency, 2525 N. Shadeland Ave, Indianapolis, IN 46219
Corey Webb, VRP Section Chief (via email)
Bruce Oertel, Remediation Services Branch Chief (via email)
Sarah Finley Johanson, IDEM Geology Services Section (via email)
Kristy McIntire, IDEM Chemistry Services Section (via email)